

From: [Renkens, Rachael](#)
To: [Candon Tanaka](#)
Cc: [Eberhardt, Maja](#)
Subject: RE: EPA HHC calculator inputs
Date: Wednesday, July 28, 2021 4:14:00 PM

Hi Candon,

Unfortunately I'm not familiar with the pdf document that you provided. Where did you obtain it? It looks like the cell numbers referenced in that pdf do not align with the table that was provided. However, looking at the Washington final rule criteria table, the reason that the BAF for the trophic level 4 is the one showing up in calculations, is because the fish consumption rates for trophic levels 2 and 3 are set to zero. (See cells D118 and D119.) It was assumed that most fish consumption is of organisms in trophic level 4. In most cases (but not necessarily all), using 100% of the fish consumption rate multiplied by the BAF for trophic level 4, yields a more stringent value because trophic level 4 organisms tend to have higher BAFs (being that they're higher in the food web). In other words, 100% of the FCR was applied to trophic level 4 organisms. Because 0% of the FCR is applied to trophic levels 2 and 3, those BAF values for trophic levels 2 and 3 are canceled out.

Total FCR = 0.175

FCR trophic level 2= 0.175 * 0% * BAF2 = 0

FCR trophic level 3= 0.175 * 0% * BAF3 = 0

FCR trophic level 4=0.175 * 100% * BAF4 = ##

I hope I'm being clear. Please let me know if you have further clarifying questions.

Rachael Renkens

Water Quality Standards Coordinator

Tel. (206) 553-1580

From: Candon Tanaka <ctanaka@sbtribes.com>
Sent: Wednesday, July 28, 2021 1:20 PM
To: Eberhardt, Maja <eberhardt.maja@epa.gov>
Cc: Renkens, Rachael <Renkens.Rachael@epa.gov>
Subject: RE: EPA HHC calculator inputs

Hello Rachael,

I'm a little confused about how the "Criteria Calculation Details-PDF" and the "Washington Final Rule Criteria table calculator" work together. If I'm reading the PDF document correctly the BAF used in the calculation should be calculated using the summation of the percentages of each trophic level (TL) (TL-2=35.7%, TL-3=40.4%, TL-4=23.9%), but when I look at the calculator it is only using the TL-4 BAF number. Are the documents not aligned with each other or am I missing something? I have attached the two documents I'm discussing.

Thanks,

Candon Tanaka

Water Quality Specialist

Shoshone-Bannock Tribes

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From: Eberhardt, Maja <eberhardt.maja@epa.gov>
Sent: Tuesday, July 27, 2021 3:52 PM
To: Candon Tanaka <ctanaka@sbtribes.com>

Cc: Renkens, Rachael <Renkens.Rachael@epa.gov>

Subject: RE: EPA HHC calculator inputs

Hi Candon,

Here are two spreadsheets with HHC calculations that may help clarify how trophic levels are treated. *2015 HHC Calculator.xlsx* includes criteria for chemicals that were updated in 2015. The other spreadsheet was used to calculate criteria EPA promulgated for WA. Note that it includes the relative source contribution (RSC) values that EPA used for WA in response to concerns about “double counting” when marine fish that are included in the RSC estimate are also included in the FCR, so those don’t reflect the values used for the HHC calculator.

I hope this is useful. Rachael Renkens has offered to field questions while I am out, I’ve cc’d her.

Maja

From: Eberhardt, Maja

Sent: Thursday, July 22, 2021 12:58 PM

To: 'Candon Tanaka' <ctanaka@sbtribes.com>

Subject: RE: EPA HHC calculator inputs

Hi Candon,

Nice to hear from you, things are well here, and I hope for you, too. Here’s the most recent table of inputs I have for the Tools for Tribe HHC calculator. Sorry if I missed this earlier. Please let me know if you have questions.

Maja

From: Candon Tanaka <ctanaka@sbtribes.com>

Sent: Thursday, July 22, 2021 12:26 PM

To: Eberhardt, Maja <eberhardt.maja@epa.gov>

Subject: EPA HHC calculator inputs

Hello Maja,

I hope things are well for you. I have been working on the standards and I recall I requested the input information for EPA’s HHC calculator and I cannot find it. I’m referring to this calculator: <https://www.epa.gov/wqs-tech/water-quality-standards-tools-tribes>. This is what we used to develop the HHC for our standards outside of a few outstanding chemicals (Arsenic, Thallium, etc.) that were developed using other methods. If you already sent me that information could you please resend it.

Thanks,

Candon Tanaka

Water Quality Specialist

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